

GAS TURBINE ENGINE INCLUDING AIRFOILS HAVING AN IMPROVED  
FILM COOLING CONFIGURATION AND METHOD THEREFOR

ABSTRACT OF THE DISCLOSURE

An airfoil for a gas turbine engine blade includes a plurality of film cooling holes extending through its outer surface. The film cooling holes are formed by defining at least a first datum structure and a second datum structure, and then forming each film cooling hole at a location on the airfoil outer surface relative to the first and second datum structures. As a result, each film cooling hole has a centerline extending therethrough that forms a compound angle with respect to a tangent to the outer surface, and the distance between the centerlines of each film cooling hole is at least a predetermined minimum distance.